Fecha de recepción: noviembre 2012
Fecha de aceptación: mayo 2013
Versión final: junio 2014

Meditation on a simple stitch

Melinda Wax *

Summary: Today, in a school of art and design, students are physically and creatively compromised by the demand for use from multiple devices that challenge their minds and bodies making learning a constant debate between the intellect/knowledge and instinct/practice. Too often, neither wins, and students live detached from the opportunity to learn and develop in a manner that will anchor them in their craft. This paper seeks to provide insight into the importance of building tactile, sensory and creative intelligence through the simple practice and use of handwork in the making of things. Through examples of students who I have worked with as a teacher of millinery I propose that this practice ultimately leads to a high level of and appreciation for craftsmanship which finds expression not only in ones work but in multiple aspects of ones life. Arguing for a renewed cultivation of manual competence in balance with the digital technologies bridging between methods which blend hands and minds into one effort/exercise with immediate results versus methods which take time and patience but result in a multi-faceted and life-long learning experience. Meditating on a single stitch has a power that transcends the act of doing and making to become an essential part of living as a creative individual.

Keywords: cognitive learning - craft - craftsmanship - creative intelligence - fashion students - generational learning - handwork - manual competence - meditation - millinery - pattern recognition - practice - stitching - stitch - teaching millinery design.

[Summaries in spanish and portuguese at pages 203-204]

(*) Associate Professor of Design in the School of Arts, Media and Technology at Parsons The New School for Design in New York City where her specialty is teaching Millinery Design, a curriculum she developed after years of running her own millinery business. At Parsons she has taught in the School of Design Strategies and at Pratt Institute in the School of Art & Design Education. Melinda has a BA in Fine Arts from the University of California at Santa Cruz, an AAS in Textile/Surface Design from FIT/SUNY, and an M.S.Ed. from Pratt Institute where her thesis, Out of the Bauhaus and Into the Future examined the history of art/design foundation education and its future. She is currently the Director of Adult Programs/SPACE at Parsons. [See full version at page 208]

Generational learning. Women and stitching

> For centuries women have done needlework. It was a necessary skill, it was an accomplishment, and it was a chance to appear to be active while giving one's mind free reign to consider, to think. Calm, slow, careful stitches gave the appearance of activity, skill and usefulness, but the mind was free to think, to be quiet, to wander... An unbroken thread of women, stitching quietly, their minds pondering, considering, thinking, deliberating... for ages and ages. (Andrews, 2011)

I did not start out knowing that the use of my hands would lead to such deep thoughts. At 10, when unable to go to school due to illness, my mother would drop me off at my grandmother's and I would sit for hours making chains of crocheted yarn that she would later teach me to stitch together to make slippers. In the summer, she would walk me to the local 'five and dime,' J. J. Newberry's, and buy me a potholder, stenciled with a design of a cat and a basket, ready for the colorful embroidery threads I had seen in her metal box at home. After learning how to knit, crochet and embroider my mother taught me how to sew. First by hand, my own simple attempts to dress my Barbie dolls, and then by machine –starting with something simple like an apron, half a gathered skirt with a waistband that had ties at the waist. One Christmas, upon observing the two satin beauties I had made for her as gifts, she instructed me to take them apart and re-sew; I hadn't turned under the inside seam of the waistband and if I was making something this good, it had to be "done right."

I grew up around people who made everything with their hands. My father spent all weekends of my childhood in the garage of our Southern California home, making stuff. Cabinets, workbenches, doll furniture, gadgets to help make things work more efficiently around the house, a doghouse with a shingled roof for our labrador retriever, Nappy. My mother was no less busy making all of my clothes, wall papering every room in the house, making curtains and bedspreads, braided wool rugs, upholstering furniture –there wasn't anything my parents couldn't fix or make. I grew up being a part of a manually competent family. It wasn't until much later in my life I would realize the significance of this generational education and come to understand the value of meditation on a simple stitch.

Maggi Toner-Edgar, a milliner and educator echoes my experience in her recent book, *Thinking Caps:*

> My mother and sister were a strong influence on my artistic development, in particular in relation to textiles, as we passed on the heritage of textile crafts from a mother to daughter and sister to sister, this was quite a common occurrence for our generation (Parker, R. Subversive Stitch 1984). It meant that by the age of seven most children had learnt to stitch, knit, crochet and make proddy rugs. (Toner-Edgar, 2012, p. 5)

There is a long history of women and handwork; work done for the court, as in embroidery and sewing done for the practical needs of providing one's family with clothing. The training of women for the 'trades' of handwork (and later machine sewing) began when women needed to work, making money for their families. Beth Harris (2002) introduces the economic impact of becoming part of a previously male domain. Although women had worked with their hands sewing and doing embroidery, it wasn't until it became a financial necessity to work outside of the home, that women became part of the larger system,

> Milliners and dressmakers came from families who had enough money to pay for them to be apprenticed to learn the trade. This type of employment was part of an old, established apprenticeship system (like tailoring among men), and it was one of only a few occupations open to women which offered a skill and a sense of belonging to a trade, and which promised, at least after the apprenticeship period was served, a decent and respectable living (Harris, 2002).

Situating ourselves in the world by what we do, what we make

No one at this time would have talked about the importance of 'situating oneself' in the craft of one's work, as it was a necessity of living and getting along, (even the court's ladies-in-waiting embroidery was a kind of obligation to whom they served). And yet today, with the luxury of most all our goods and services being provided by others, we, as educators in schools of art and design can step back as we train the designers and crafters of 'goods' to examine the process of making, and we must.
Matthew Crawford in his book *Shop Class as Soulcraft* (2009) reminds us that there was a time when the work we did with our hands helped us to define where we belonged in our world. In a village, the blacksmith, the carpenter, the plumber, the gardener, the architect could all see around them the result of their work. "I did that." "I made that." This kind of collective manual and intellectual involvement with work and community allowed us to know and identify something of ourselves in the world around us. Crawford goes on to describe how this daily practice of manual work combined with a connection to others, a continual problem solving within a craft, leads to accumulated knowledge that is essential to becoming masterful in the work we do:

> It is another thing for a carpenter to walk around a town and see the new entryway he designed and built for that store, to learn from a direct experience and from chatting with others of its functional and aesthetic achievements and shortcomings, and to modify future work in accordance with this running feedback that is picked up in the course of daily activities. (Crawford, 2009, p. 186)

There is a value in knowing how what we do fits into the world we inhabit. When it involves something that we've made, we identify ourselves in that object, those things, that building. The innate and learned intelligence that comes from this kind of work was once a natural extension of our being human. Anni Albers (1961) refers to a very early proclivity for the use of our hands, "There is, of course, a most legitimate urge in everyone to use his hands, and this takes us back again to earliest periods. For when man learned to go upright, his hands were freed for the making of things, his most human trait, and his mind developed with it." (p. 54) Along with this natural need to make things came an understanding of how things were put together, how they worked. Albers (1944) again notes the importance of our well-being in the making and identifying of that which we have given form. "Formed things and thoughts live a life of their own; they radiate meaning. Making something become real and take its place in actuality adds to our feeling of usefulness and security. Learning to form makes us understand all forming." (p. 28)
As our goods and services are for the most part made and performed outside of our daily experiences I believe most people live with a sense of disconnection as to where their things come from and how they are made. An extension of this is that no one seems to know anymore how things are put together, so when something breaks we tend to simply toss it and obtain a new one, rather than seek out an expert to fix it (if they even exist anymore) or figure out what is needed to make it work again. Crawford (2009) reminds us of a time when the all-American department store Sears had a catalogue (which just about every family in America had at home) and included, "…blow up parts diagrams and conceptual schematics for all appliances and many other mechanical goods. It was simply taken for granted that such information would be demanded by the consumer." (p. 2) There was a time when we wanted to know and were given the information to know. Now, our economy is based on habits of mass consumption and there is no value in knowing how things go together. I believe this disconnect has a direct effect on the lives our students and how they relate to their world and the work they make. Add to this the constant use of digital tools, which offer immediate access to whatever is being looked for, and a misconception, not unreasonably, develops about the very nature of time and process.

The separation of thinking from doing

We can go farther back then the digital revolution to blame the separation of thinking from doing. In 1917, the Smith-Hughes Act gave federal funding for manual training in two forms: as part of a general education and as a separate vocational program in the public schools. (Crawford, 2009, p. 30) This served two working classes during what was known as the Arts and Crafts Movement. The children of the upper class took a 'general education' shop as enrichment to a pre-college curriculum and working class children "would be socialized into the work ethic appropriate to their station through what was now called "industrial arts" education," in the vocational program. (p. 30) The educational discrepancies continued in that only the general education emphasized, "the learning of aesthetic, mathematical, and physical principles through the manipulation of material things." (p. 31) So we find early on that one's economics defined whether training would

be integrative, cognitive or simply manual. It is hard for me to imagine that through the process of the work, in and of itself, many manually trained workers developed skills whereby they naturally, perhaps the ones with innate talent, transformed their work into a masterful craft.

Something else had happened in the American workplace at the same time that mirrored this two-track educational scheme, Henry Ford's innovation of the assembly line where there was a "severing of the cognitive aspects of manual work from its physical execution." (p. 31) And so we see another aspect of the separation of work, mental versus manual and white color versus blue collar. When a separation like this takes place it is not surprising that those doing the 'mental work' are likely to see the big picture but may have no idea about all the parts that put together the whole. Meanwhile, those who may have once known how to put all the parts together are now left doing piecework, work that over time may leave this worker without the knowledge of how the whole thing goes together. This devaluation of 'making', the ability to bridge the craft and intellectual skills to use one's hands in a holistic way, pushed such activities into the form of arts or crafts and schools of art/design followed suit. Albers eloquently describes what once was:

> When a piece of work was in his hands from the beginning to the end, he could elaborate on the shape and add patterns as a natural development in its completion. But there remain now only a few things which we form one by one, as the craftsman does. We deal today with mass production, and as a result the process of manufacture is necessarily broken up into separate stages, each one in different hands. (Albers, 1943, p.18)

There was an economic rationale for manufacturers to reorganize the workplace but this need to increase output took away from what once had been "the intrinsic richness of manual work" (Crawford, 2009, p. 27). There is no question as to why the industrial revolution required this change to increase the production of goods but the effect it had on the future of how people would think about the work they do is evident in our culture today and becomes increasingly obvious when working in a school of art and design education.

Perhaps we are in another kind of revolution as we attempt to integrate and bridge the digital access and tools we have with the manual and intellectual skills we want our students to master. Toner-Edgar (2012) describes this as:

> I began to use textiles and millinery to make a difference to the way people viewed their own existence, to speak about the physical reality of connections in contrast to the virtual world of e-connections. The tactile quality of surfaces and the knowledge and memory evoked by our perception of textiles is an important method of learning. Our multi-level complex conceptual processes all come into play when involved in the designing and making of textiles, hats and a variety of other crafts. (Toner-Edgar, 2012, p. 2)

With so many digital tools at our hands it is not surprising that our way of thinking begins to be compartmentalized based on the task/s at hand. The digital world has changed our way of thinking and making, but the fundamentals of making remain the same regardless of the tools we have in our studios.

Knowledge work and manual competence

"The concept of making something by hand with the expertise that has been handed down to you through the years is something I've been committed to for a long time." (Ralph Lauren TV ad, 2.12.13)

Computers have allowed us to accelerate our access to information in ways we couldn't have imagined even 10 years ago. However, the limitations of a digital education become more evident when teaching a manual skill because there is no replacement for the experience and practice that comes from 'doing.' It occurs to me that until our brain is transformed in some way to accommodate the complexity and multifaceted nature within which most of us operate (at work and at home), we will need to rely upon reflection, meditation and the simple connections between things to keep us grounded. What occurs when we work with our hands and find the intelligence born of the connection between our hands + heart + mind will continue to be a necessary/essential part of the creative/learning process.
However, any college graduate looking for work will now find that businesses are seeking"knowledge workers" a term not all that different from what we saw when the assembly line separated the 'thinkers' from the 'doers', but this time it has deeper implications to how we connect to the world around us because of the digital revolution. It also has consequences for those of us who teach students how to make and create because this kind of work cannot be done with knowledge alone. Seeking a more humanistic place from which to create one's stance can be difficult when aspects of a more human nature (as most all making entails) are not valued. Crawford (2009) states,

> Many people are trying to recover a field of vision that is basically human in scale, and extricate themselves from dependence on the obscure forces of a global economy. The college student interviews for a job as a knowledge worker, and finds that the corporate recruiter never asks him about his grades and doesn't care what he majored in (Crawford, 2009, p. 3).

As teachers of art and design we can't help but feel the edge of this aspect of our students' lives; an emphasis on 'knowing' more than 'making', a pressure to learn 'how to' through facts and principles, rules to follow to get the needed results. Even in a school where 'making' should be paramount to conceptualization, current trends show that new courses for first year students will rely more on conceptual skills and 'design thinking' than on manual skill acquisition. Recent studies of college students (Ripley, 2012) have shown that

"students can focus for only 10-18 minutes before their minds begin to drift; that's when their brains need to do something with the new information, make a connection to use it to solve a problem." (p. 39) With physics students this resulted in their being able to "recite Newton's laws and maybe even do some calculations" (p. 39) but they couldn't apply the laws they had learned to problems they had never seen before. They only memorized the information, they hadn't learned it cognitively and they couldn't apply in a practical way.
I discovered this gap with my millinery students after noticing that very few of them arrived to class with the appropriate tools for the work to be done. Typically, as a class ends I announce what will be due the following week and what we will be working on in the studio. This includes materials and supplies. Students will write down this information or a few brave ones will leave it to memory. Midweek I receive a few emails requesting the list of supplies needed for the next class. This always causes me concern, wasn't that clear at the end of our last class? Then one day as I was preparing for class, going through my mental list of what I would need for my demonstrations, connecting all the parts to the materials and resources that would be necessary, I realized that what was missing from my students' thinking was any account of what they would be doing with the tools and materials they were being asked to bring. This was not from lack of being told, or having physical demonstrations performed from which they could take notes or photographs. I believe the gap in thinking comes purely from a lack of mental training in taking the time to think about how things go together, how things work. If my students would take the time to think 'this needle for that thread, being used on that material which requires it…' rather than writing down a list delivered from me without attaching any of their own thought process to what is being listed, they might find more grounding in their work. It's a kind of ownership of the process. And, in a time when pictures can be taken of notes written on a white board rather than writing the notes down in a sketchbook, this kind of separation of thinking from doing is problematic.
This takes me back to my earlier comments about how we inhabit environments that are furnished with items we have little connection to, missing information about how what we have is made or put together, how it came to be in the world. For students who are learning how to make and craft, who will be producing and manufacturing perhaps these very same items in our future, this ability to be able to think through how things are connected is essential.
Along with this need for learning how to see the connections between things there is also the need to be educated in a balanced and grounded environment. We can offer that to our students if we can understand it more fully ourselves. Anni Albers, having been both a teacher and designer, expresses this persuasively (and it is still true generations later):

> Too much emphasis is given today in our general education to intellectual training. An overemphasis of intellectual work suggests an understanding on a ground which is not the ground of our own experiences. It transposes understanding into assumed experiences which can be right but may be wrong. (Albers, 1944, p. 26)

The balance of the intellectual and the manual is paramount in design school. Too often, especially in a school of fashion, students are working on designs that are built out of fantasy, with materials that they may never put their hands to, with the design/market intention of providing goods to a very small segment of the population who can afford such items. I wonder sometimes if letting our students work in a playful and experimental process in the beginning, without a true sense of the marketplace where their designs will produced and sold, robs them of the foundational learning, the cognitive process that can take place when the work is grounded in classic skills and craftsmanship rather than starting out designing from a place of whimsy.

Working above the earth

In his play *Clouds*, Aristophanes places a preoccupied Socrates in a wicker basket held aloft by a crane looking upward. A would-be student asks him what he's doing, what is he looking at? Socrates replies, "I traverse the air and contemplate the sun." "Why do this from above the ground," the student queries. Socrates responds by telling him that his findings on meteorological matters have been the result of suspending his mind and infusing the minute particles of his thought into the air, which it resembles. "If I had been on the ground and merely gaped at the upper regions from below, I would never have made my discoveries. For the earth sucks the thought-juice down." (Crawford, 2009)
It is a very risky view of knowledge, and therefore education, if we view it only from what can be obtained while suspended aloft in a basket. If we separate knowing from doing, we jeopardize our students' opportunities to know their work 'from the ground up'. I don't think it's such a bad thing if the earth "sucks the thought-juice down" because most of our working lives we are walking on that very ground. This does not preclude the whimsical, the fashionable or the fantastic, but all balanced within a context of understanding the larger pieces of the whole. I sense a kindred understanding of this in Albers (1943) *On Designing*: "It is easy to invent the extravagant, the pretentious, and the exciting; but these are passing, leaving in us only neurotic aimlessness. The things that have lasted and the things that will last are never subject to quick fashion." (p. 21)

The value of cognitive learning

Cognitive learning enables us to create and transmit a complex culture that includes symbols, values, beliefs and norms. I like to think of cognitive learning as that place where our brain, heart and hands link when we are learning and making. When we are working on this plane, it can feel like an epiphany, when everything comes together and we feel that moment where our work and we are one. This is not something we can teach but simply prepare our students to experience. We tend to teach the more obvious skills, rules, principles, the technical aspects of skills/building. However, the separation of the two can create a kind of wasteland for the creative individual, where the creative mind lives

on one plane and the manual competence lives on another. What is too often missed is the opportunity for a holistic approach where these two fundamentals of learning are combined.
Where I work in a school of fashion, I see this repeatedly; students master a skill but have no sense of a larger connection to the work, no sense of how to place what they have learned in the larger context of the world or more specifically, the workplace; and on a more spiritual and personal level, within themselves.
Cognitive learning can become a flexible term used by educators to fit their needs or teaching style. For example, a constant volley is played out where one group advocates that play and experimentation are essential to foundational learning, while, another group promotes that learning basic skills are the foundation from which play and experimentation may later take place. (This is the same conflict out of which the Bauhaus grew, so we are not entering anything new.) I liken this second approach to barre work in ballet class for a dancer or learning scales in classical piano as part of an early training for a pianist. Along with learning the foundational core of whatever skill set is at hand, there is the other aspect of mastering that skill which requires practice. There is an old New York joke about this, that when a pedestrian on Fifty-seventh Street in New York City stopped the famous musician Jascha Heifetz and inquired, "Could you tell me how to get to Carnegie Hall?" "Yes," said Heifetz. "Practice!" (Cerf, p. 335) It is in the space of this repetitive nature of 'practice' that meditation on a simple stitch lives.

Thinking as doing

"It is by having hands that man is the most intelligent of animals". (Anaxagoras)

Much of our current educational system is based on a view about what kind of knowledge is important: "knowing that, as opposed to "knowing how." Practical know-how, on the other hand, is always tied to the experience of a particular person; it can't be downloaded, it can only be lived. This is where a course like mine, where all projects are made by hand, becomes more important than it might have been at any other time. The work required, the details of hand stitching for a specific need of the materials, learning to hold what you are working on in your hands, being part of the total completion of the finished piece; there aren't many activities today where we can have this kind of experience, and this is where meditation on a simple stitch begins.
Doug Stowe is a self-employed woodworker who also teaches. He describes the value of 'thinking as doing':

> It is the opportunity to be engaged through the hands that brings the seen and known to concrete reality in human experience. Without the opportunity to learn through the hands, the world remains abstract, and distant, and the passions for learning will not be engaged. When the passions ARE engaged and supportive systems (teachers, community

> resources, technology, etc.) are in place, students find no mountain is too high, and no concept too complex to withstand the assault of their sustained interest and attention. (Stowe, 2006)

With their hands engaged and their minds activated, seeking connections and understanding how what they are working on goes together, greater understanding can take place.

Materials

There are many guides along the way. Materials are one. The limitations (seen as opportunities) that materials provide give students a structure for making decisions. In my course, Millinery I, the first project is made with a very stiff canvas used in the crafting of hats, buckram. We use it as the foundation material for a hat that will be covered with fabric. What this imposes is a decision in the design process that requires understanding what the material can do. Most students aren't used to thinking this way, they want to design something and then make the material adapt to that design. By taking the time to examine and test a material, I often suggest "push it to its limits"; students enter into a part of the creative process that can ground them in the 'making'. Albers (1982) describes this clearly,

> Now, material, any material, obeys laws of its own, laws recognizably given to it by the reigning forces of nature or imposed by us on those materials that are created by our brain, such as sound, words, colors, illusions of space –laws of old or newly invented. We may follow them or oppose them, but they are guidelines, positive or negative. (Albers, 1982, p. 73)

I believe we can teach many different lessons when we ask our students to 'listen' to the materials they use. I learned from Anni Albers about how materials can 'speak' to us, "a sound, a touch, hardness or softness; it catches us and asks us to be formed." (p. 73) And in this 'forming' we find a language in our work as we work with materials and "learn to obey their rules and their limits". (p. 73) We adjust, we invent, and in that process we begin a "dialogue with our medium". (p. 73) This subtle mastering of medium allows our work to flow into invention that is then often guided by intuition. The work begins to have a life of its own and we are grounded in that experience of thinking as doing.
David Mamet (1984), the playwright, compares his process of writing to woodcarving, describing much the same phenomena,

> You start to carve wood and very quickly the thing takes on a life of its own. Part of the wisdom of woodcarving is to realize when the wood is telling you where it wants to go. Obviously it's going to be a duck if you start out to make a duck, but the kind of duck it's going to be is largely dictated by

> the kind of wood. And there is a similar phenomenon in writing drama. You start out with an idea, it becomes something else, and part of the wisdom is learning to listen to the material itself. Much of the material, of course, is in the subconscious (Mamet, 1984).

When our work leads us into the realm of working automatically, using intuition and what we have learned along the way to guide us, we can begin to know what we are doing with a deeper knowledge of the work and of ourselves. When we are absorbed in the work, taking pleasure in all aspects, we can rely on the fundamentals, which have now become automatic, to guide us into the future with a stock mental library of experiences, failures and problems solved.

Building a holistic design toolbox

I like to think I am adding to my students' 'toolbox' by teaching them as I do. Learning to use all our senses as we work is important but usually my students don't believe me! For instance, when we block felt, steamed and then pulled over a wood block, we leave it to dry. Students, anxious to see what they have formed, want to pull the felt body off before it's dry. "How do you know if it's dry?" they will ask. "Touch it to your cheek," I will say. Usually they look at me with a blank expression. They're not going to do that! Then I pick up the felted block, touch it to my cheek, usually say, "No, it's not dry yet," then touch it to one of their cheeks and a smile comes across the face, "Oh, yes, it's not dry yet." It's such a simple test and yet most of my students have not lived a life where using all of their senses is required. When we work at something long enough, we gain a kind of judgment that arises from the experience of doing the work. We begin to rely on educated hunches, a kind of 'learned' intuition, rather than on rules or formulas; using all our senses rather than a textbook or a prescribed linear thought process. It is not easy to teach this, we can only be examples for our students to follow. Creating and making requires endless decision-making. The more we have done and observed, the more we can recognize what something we are working on may need. Over time, patterns, results, both good and bad, teach us. Learning to harness the patterns, as an intelligence that informs us in the decision-making process, is essential for us to help our students learn and recognize. Crawford (2009) states,

> The experienced mind can get good at integrating an extraordinarily large number of variables and detecting a coherent pattern. It is the pattern that is attended to, not the individual variables. Our ability to make good judgments is holistic in character, and arises from repeated confrontations with real things: comprehensive entities that are grasped all at once, in a manner that may be incapable of explicit articulation. (Crawford, 2009, p. 168)

And, our students need this opportunity to practice while we are there to guide them and acknowledge their experiences.

Zen and the art of using our hands

Many of my students initially don't like the couture technique handwork required for making hats in my millinery course. I see them struggling with basic hand stitches and quite often one of them will ask, "can't this be done another way?" I always answer, "Yes, but not in my class." What I have realized over the years of working with my own hands and teaching others how to work with theirs, is there is much more that develops from this work than the finished piece. There is a great deal to learn from each part of the process when one commits to be fully engaged. I tell my students they may not end up being milliners (most of them are in school to become fashion designers) but one day they will be doing something else and discover that what they learned in my class has radiated out and given meaning to many other parts of their life and work.

References

Adamson, G. (Ed.). (2010). *The Craft Reader*. Oxford and New York: Berg.

Albers, A. (2000). *Anni Albers: Selected writings on design*. Hanover, NH: Wesleyan University Press.

Andrews, K. (2011, June 18). Meditative quality of simple stitches. [Web log comment]. Retrieved from http://www.theunbrokenthread.com/blog/2011/06/18

Andrews, K. Überlegen - To think, consider, ponder, deliberate. [Web log comment]. Retrieved from http://www.theunbrokenthread.com/blog/

Anaxagoras (Soulcraft/pg161)

Cerf, B. (1956) *The Life of the Party: A new collection of stories and anecdotes*. Garden City, NY: Doubleday.

Crawford, M. B. (2009). *Shop Class as Soulcraft: An inquiry into the value of work*. New York: Penguin Group.

Freedman, S. G. (1985, April 21). The Gritty Eloquence of David Mamet. *The New York Times*. Section 6, Page 32, Column 2. Retrieved from http://www.nytimes.com/1985/04/21/magazine/the-gritty-eloquence-of-david-mamet.html

Greer, B. (2011) Knitting for Good!: A guide to creating personal, social and political change, stitch by stitch. [Web log comment]. Retrieved from http://www.dailyom.com/library/000/001/000001766.html

Harris, B. (2002, November 18). Slaves of the Needle: The seamstress in the 1840s. [Web log comment]. Retrieved from http://www.scholars.nus.edu.sg/victorian/gender/ugoretz1.html

McCullough, M. (2010). Abstracting Craft: The Practiced Digital Hand. In Adamson, Glenn (Ed.), *The Craft Reader* (pp. 310-316). Oxford and New York: Berg.

Parker, R. (2011). *The Subversive Stitch: Embroidery and the making of the feminine*. London and New York: I. B. Taurus & Co Ltd.

Pirsig, R. M. (1974). *Zen and the Art of Motorcycle Maintenance: An inquiry into values*. New York: HarperTorch *An Imprint of* HarperCollins*Publisher*.

Phillips, M. & Toner-Edgar, M. (2004). Education and Hybrid Practice: Reflective Craft Practice. [Presentation]. *Paper presented at the Challenging Craft International Conference,* Gray's School of Art, Aberdeen, Scotland.
Ripley, A. (2012, October 29). Higher Education: College is dead. Long live college! *Time,* 38-41.
Roudane, M. C. (1984, December 4). An Interview with David Mamet. Retrieved from ht tp://www.upstartfilmcollective.com/portfolios/jcharnick/mamet-museum/old-interview.html
Stowe, D. (2006, October 16). A Brief Case for the Useful Arts. [Web log comment]. Retrieved from http://wisdomofhands.blogspot.com/2006_10_01_archive.html
Toner-Edgar, M.(2012). *Thinking Caps.* Cumbria, UK: 2QT Limited.

Resumen: En la actualidad, en una escuela de arte y diseño, los estudiantes se encuentran física y creativamente comprometidos por la demanda en el uso de múltiples dispositivos que desafían sus mentes y cuerpos haciendo del aprendizaje un debate constante entre el intelecto-conocimiento y el instinto-práctica. En la mayoría de los casos, los estudiantes se alejan de la oportunidad de aprender y desarrollarse en una metodología que les permita el anclaje con su oficio.
Este artículo tiene por objetivo concientizar acerca de la importancia de construir la inteligencia táctil, sensorial y creativa a través de la simple práctica y el uso de trabajo manual en la producción de objetos. A través de ejemplos de estudiantes de sombrerería, se intenta demostrar que esta práctica conduce en última instancia a un mayor nivel de reconocimiento de la artesanía que se expresa no sólo en el trabajo sino en los múltiples aspectos de la vida personal. Asimismo, este trabajo defiende el cultivo renovado de la competencia manual en equilibrio con las tecnologías digitales como puente entre los métodos en los que se combinan las manos y la mente en un solo esfuerzo / ejercicio con resultados inmediatos frente a los métodos que requieren tiempo y paciencia, y que resultan en una experiencia de aprendizaje con múltiples facetas y de por vida. Meditar sobre una simple puntada tiene un poder que trasciende el acto de hacer y construir para convertirse en una parte esencial de la vida como una persona creativa.

Palabras clave: aprendizaje cognitivo - aprendizaje generacional - artesanal - artesanato - costura - destreza - diseño de sombreros - enseñanza del diseño - estudiantes de diseño - hecho a mano - inteligencia creativa - manual - meditación - práctica - puntada - reconocimiento de patrones - sombrerería.

Resumo: Hoje, numa escola de arte e design, os estudantes se encontram física e criativamente comprometidos pela demanda no uso de múltiplas dispositivos que desafiam suas mentes e corpos fazendo da aprendizagem um debate constante entre o intelecto –conhecimento e o instinto– prática. Na maioria dos casos, os estudantes retiram-se da oportunidade de aprender e desenvolver-se numa metodologia que lhes permita uma profunda vinculação com seu ofício.

Este artigo tem como objetivo conscientizar sobre a importância de construir a inteligência táctil, sensorial e criativa através da simples prática e o uso de trabalho manual na produção de objetos. Através de exemplos de estudantes de design de chapéus, intenta-se demonstrar que esta prática conduz em última instancia a um maior nível de reconhecimento do artesanato que se expressa não somente no trabalho senão nos múltiplos aspectos da vida pessoal. Além, este trabalho defende o cultivo renovado da competência manual em equilíbrio com as tecnologias digitais como ponte entre os métodos nos quais se combinam as mãos e a mente num solo esforço / exercício com resultados imediatos frente aos métodos que requerem tempo e paciência, e que resultam numa experiência de aprendizagem com múltiplas facetas e para sempre. Meditar sobre um simples ponto tem um poder que transcende o ato de fazer e construir para se converter numa parte fundamental da vida como uma pessoa criativa.

Palavras chave: aprendizagem - aprendizagem cognitivo - aprendizagem geracional - artesanal - artesanato - costura - design de chapéus - destreza manual - ensino de design - estudantes de design - feito a mão - inteligência criativa - meditação - ponto - prática - reconhecimento de patrões.